

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		



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EcoRI RBS PeIB leader

1 GAATTCATTAAAGAGGAGAAATTAACCATGAAATACCTATTGCCTACGGCAGCCGCTGGCTTGCTG

1► M K Y L L P T A A A G L L

NcoI ♦ VH anti-CD3 Frame-H1

67 CTGCTGGCAGCTCAGCCGGCCATGGCGCAGGTGCAGCTGCAGCAGTCTGGGGCTGAACTGGCAAGAC

14► L L A A Q P A M A Q V Q L Q Q S G A E L A R

CDR-H1

134 CTGGGGCCTCAGTGAAGATGTCCTGCAAGGCTTCTGGCTACACCTTTACTAGGTACACGATGCA

36► P G A S V K M S C K A S G Y T F T R Y T M H

Frame-H2 CDR-H2

198 CTGGGTAAACAGAGGCCTGGACAGGGTCTGGAATGGATTGGATACATTAATCCTAGCCGTGG

57► W V K Q R P G Q G L E W I G Y I N P S R G

Frame-H3

261 TTATACTAATTACAATCAGAAGTTCAAGGACAAGGCCACATTGACTACAGACAAATCCTCCA

78► Y T N Y N Q K F K D K A T L T T D K S S

323 GCACAGCCTACATGCAACTGAGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGATA

99► S T A Y M Q L S S L T S E D S A V Y Y C A R Y

CDR-H3

390 TTATGATGATCATTACAGCCTTGACTACTGGGGCCAAGGCACCACTCTCACAGTCTCCTCAG

121► Y D D H Y S L D Y W G Q G T T L T V S S

CH1 Linker VL anti-CD19 Frame-L1

452 CCAAAACAACACCCAAAGCTTGGCGGTGATATCTTGCTCACCCAAACTCCAGCTTCTTTGGCTGTG

142► A K T T P K L G G D I L L T Q T P A S L A V

CDR-L1

517 TCTCTAGGGCAGAGGGCCACCATCTCCTGCAAGGCCAGCCAAAGTGTTGATTATGATGGTGA

164► S L G Q R A T I S C K A S Q S V D Y D G D

Frame-L2

579 TAGTTATTTGAACTGGTACCAACAGATTCCAGGACAGCCACCCAAACTCCTCATCTATGATGCA

184► S Y L N W Y Q Q I P G Q P P K L L I Y D A

CDR-L2

643 TCCAATCTAGTTTCTGGGATCCCACCCAGGTTTAGTGGCAGTGGGTCTGGGACAGACTTCACCC

206► S N L V S G I P P R F S G S G S G T D F T

CDR-L3

707 TCAACATCCATCCTGTGGAGAAGGTGGATGCTGCAACCTATCACTGTGAGCAAAGTACTGAGGA

227► L N I H P V E K V D A A T Y H C Q Q S T E D

Frame-L4 C kappa NotI

771 TCCGTGGACGTTCCGTGGAGGCACCAAGCTGGAAATCAAACGGGGCTGATGCTGCGGCCGCTGGATCC

248► P W T F G G G T K L E I K R A D A A A A G S

c-myc epitope His6 tail BgIII

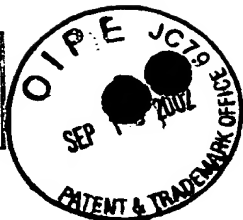
838 GAACAAAAGCTGATCTCAGAAGAAGACCTAAACTCACATCACCATCACCATCACTAAAGAT

271► E Q K L I S E E D L N S H H H H H H .

899 CT

Fig. 3A

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		



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BgIII RBS Pel B leader

1 AGATCTATTAAAGAGGAGAAATTAACCATGAAATACCTATTGCCTACGGCAGCCGCTGGCTTGC

1 M K Y L L P T A A A G L

NcoI ♦ VH anti-CD19 Frame-H1

65 TGCTGCTGGCAGCTCAGCCGGCCATGGCGCAGGTGCAGCTGCAGCAGTCTGGGGCTGAGCTGGT

13 L L L A A Q P A M A Q V Q L Q Q S G A E L V

129 GAGGCCTGGGTCTCTCAGTGAAGATTTCTTGCAAGGCTTCTGGCTATGCATTTCAGTAGCTACTG CDR-H1

34 R P G S S V K I S C K A S G Y A F S S Y W

Frame-H2

192 GATGAAC TGGGTGAAGCAGAGGCCTGGACAGGGTCTTGAGTGGATTGGACAGATTTGGCCT

55 M N W V K Q R P G Q G L E W I G Q I W P

CDR-H2

253 GGAGATGGTGATACTAACTACAATGGAAAGTTCAAGGGTAAAGCCACTCTGACTGCA

76 G D G D T N Y N G K F K G K A T L T A

Frame-H3

310 GACGAATCCTCCAGCACAGCCTACATGCAACTCAGCAGCCTAGCATCTGAGGACTCTGCGGTCT

95 D E S S S T A Y M Q L S S L A S E D S A V

CDR-H3

374 ATTTCTGTGCAAGACGGGAGACTACGACGGTAGGCCGTTATTACTATGCTATGGACT

116 Y F C A R R E T T T V G R Y Y Y A M D

Frame-H4 CH1 Linker

431 ACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCAGCCAAAACAACACCCAAAGCTTGGCGGT

135 Y W G Q G T S V T V S S A K T T P K L G G

VL anti-CD3 Frame-L1

493 GATATCGTGCTCACTCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGA

156 D I V L T Q S P A I M S A S P G E K V T M

CDR-L1 Frame-L2

557 CCTGCAGTGCCAGCTCAAGTGTAAGTTACATGAACTGGTACCAGCAGAAGTCAGGCACC

177 T C S A S S S V S Y M N W Y Q Q K S G T

CDR-L2

616 TCCCCAAAAGATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCACTTC

197 S P K R W I Y D T S K L A S G V P A H F

Frame-L3

676 AGGGGCAGTGGGTCTGGGACCTCTTACTCTCTCACAATCAGCGGCATGGAGGCTGAAGATGCTG

217 R G S G S G T S Y S L T I S G M E A E D A

CDR-L3 Frame-L4

740 CCACTTATTACTGCCAGCAGTGGAGTAGTAACCCATTTCAGTTCCGGCTCGGGGACAAAG

238 A T Y Y C Q Q W S S N P F T F G S G T K

C kappa c-myc epitope

799 TTGGAAATAAACCGGGCTGATACTGCACCAACTGGATCCGAACAAAAGCTGATCTCAGAA

258 L E I N R A D T A P T G S E Q K L I S E

His6 tail XbaI

859 GAAGACCTAAACTCACATCACCATCACCATCACATAATCTAGA

278 E D L N S H H H H H H .

Fig. 3B